JEFF-3.1 O-16
Principal cross sections

Energy (MeV)

Cross section (barns)

- total
- absorption
- elastic
- gamma production
JEFF-3.1 O-16
resonance total cross section

Energy (MeV)

Cross section (barns)
JEFF-3.1 O-16
Heating
JEFF-3.1 O-16
Damage

![Graph showing energy (MeV) vs. damage (MeV-barns). The graph has a logarithmic scale for both axes. The energy range is from $10^{-11}$ to $10^1$ MeV, and the damage range is from $10^{-6}$ to $10^{-1}$ MeV-barns. The line represents the damage as a function of energy.](image-url)
JEFF-3.1 O-16
Non-threshold reactions

Cross section (barns)

Energy (MeV)

(n,gma)
JEFF-3.1 O-16
Principal cross sections

Energy (MeV)

Cross section (barns)

total
absorption
elastic
gamma production
JEFF-3.1 O-16
Heating

![Graph showing the relationship between energy (MeV) and heating (MeV/reaction). The heating increases significantly with energy.]
JEFF-3.1 O-16
Damage

Energy (MeV)

Damage (MeV-barns)

*10^-3
JEFF-3.1 O-16
Non-threshold reactions

Cross section (barns)

Energy (MeV)

(n,gma)
JEFF-3.1 O-16
Inelastic levels

Cross section (barns)

Energy (MeV)

(n,n*6)
(n,n*7)
JEFF-3.1 O-16
Threshold reactions

Energy (MeV)

Cross section (barns)

- (n,x)
- (n,2n)
- (n,n*)a
- (n,n*)3a
- (n,n*)p
JEFF-3.1 O-16
Threshold reactions

Cross section (barns)

Energy (MeV)
JEFF-3.1 O-16
Threshold reactions

Energy (MeV) vs. Cross section (barns)

- (n,d\*17)
- (n,d\*18)
- (n,d\*19)
- (n,t\*0)
- (n,t\*1)
JEFF-3.1 O-16
Threshold reactions

Energy (MeV)

Cross section (barns)
JEFF-3.1 O-16
Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,a*1)
- (n,a*2)
- (n,a*3)
JEFF-3.1 O-16
angular distribution for elastic
JEFF-3.1 O-16
angular distribution for elastic
JEFF-3.1 O-16
angular distribution for \((n,n^*1)\)
JEFF-3.1 O-16
angular distribution for (n,n*2)
JEFF-3.1 O-16
angular distribution for (n,n*3)
JEFF-3.1 O-16
angular distribution for (n,n*5)
JEFF-3.1 O-16
Neutron emission for (n,x)
JEFF-3.1 O-16
Neutron emission for (n,2n)
JEFF-3.1 O-16
Neutron emission for (n,n*)a
JEFF-3.1 O-16
Neutron emission for \((n,n^*)p\)
JEFF-3.1 O-16
Neutron emission for (n,n*)d
JEFF-3.1 O-16
Neutron emission for (n,2np)
JEFF-3.1 O-16
Neutron emission for \((n,2np)\)
JEFF-3.1 O-16
Neutron emission for \((n,\text{npa})\)
JEFF-3.1 O-16
Neutron emission for (n,n\(^*\)c)
JEFF-3.1 O-16
Photon emission for (n,x)
JEFF-3.1 O-16
Photon emission for \((n,n^*)3a\)
JEFF-3.1 O-16
Photon emission for \((n,n^*)p\)
JEFF-3.1 O-16
Photon emission for (n,n*)d
JEFF-3.1 O-16
Photon emission for (n,2np)
JEFF-3.1 O-16
Photon emission for (n,2np)
JEFF-3.1 O-16
Photon emission for (n,npa)
JEFF-3.1 O-16
Photon emission for (n,n*c)
JEFF-3.1 O-16
Photon emission for (n,2a)
JEFF-3.1 O-16
Photon emission for (n,pa)
JEFF-3.1 O-16
Photon emission for (n,t*c)
JEFF-3.1 O-16
thermal capture photon spectrum
JEFF-3.1 O-16
14 MeV photon spectrum
JEFF-3.1 O-16
Particle heating contributions

Energy (MeV)

MeV/collision

Energy (MeV)

protons
deuterons
tritons
alphas
JEFF-3.1 O-16
Particle production cross sections

Energy (MeV)

Cross section (barns)

- protons
- deuterons
- tritons
- alphas
JEFF-3.1 O-16 protons from (n,x)
JEFF-3.1 O-16
protons from (n,n*)p
JEFF-3.1 O-16
protons from (n,2np)
JEFF-3.1 O-16
protons from (n,2np)
JEFF-3.1 O-16
protons from (n,npa)
JEFF-3.1 O-16
protons from (n,pa)
JEFF-3.1 O-16
deuterons from (n,x)
JEFF-3.1 O-16
deuterons from (n,n*)d
JEFF-3.1 O-16
tritons from (n,x)
JEFF-3.1 O-16
tritons from \((n,t^*c)\)
JEFF-3.1 O-16
alphas from \((n,x)\)
JEFF-3.1 O-16
alphas from \((n,n^*)a\)
JEFF-3.1 O-16
alphas from (n,n*)3a
JEFF-3.1 O-16
alphas from \textit{(n,npa)}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{geometry.png}
\caption{Graph showing the distribution of secondary energy and energy in MeV for JEFF-3.1 O-16 alphas from \textit{(n,npa)}.}
\end{figure}
JEFF-3.1 O-16
alphas from (n,2a)
JEFF-3.1 O-16
alphas from (n,pa)
JEFF-3.1 O-16
angular distribution for (n,a*0) alpha